

No. 8.

실험실에서 미세수술시 항혈전제 및 혈전 용해제 투여후 투과형 전자 현미경 소견

전북대학교 의과대학 정형외과학교실

이준모·정철원

유리 조직의 접합후 야기되는 모세 혈관의 혈류 차단은 접합조직의 생존에 큰 영향을 미치므로 혈류 차단의 원인을 규명하고자 하는 많은 실험이 진행되어 왔으나 아직도 미세 수술 분야에서는 미해결의 과제이다.

저자는 장시간 허혈 상태에 있는 가토 이개를 실험 model로 하여 혈전 용해제(Urokinase)와 항 혈전제 (heparin)의 병용 또는 단독 사용이 모세 혈관의 개존성에 미치는 영향을 보기 위하여, 절단된 가토 이개를 섭씨 4도에서 8시간, 그리고 이어서 섭씨 20도에서 16시간 허혈 상태로 유지한 후, 약물 처리 후 미세 수술 기법으로 재접합하였으며, 레이저 초음파 혈류 측정기와 동위원소를 이용하여 미세혈관의 혈류를 측정하고, 투과형 전자 현미경으로 조직 소견을 관찰하였다.

No. 9.

선천성 경골 가관절증에 시행한 생 비골 이식술

경희대학교 의과대학 정형외과학교실

유명철·한정수·정덕환·남기운·이건희*

선천성 가관절증은 골의 연결이 선천적으로 끊어진 상태를 말하는 것으로 이를 치료하기 위한 수많은 치료 방법들이 시행되어 왔으며, 이들 가관절증은 일단 골유합이 이루어진 후에도 재발의 가능성이 농후하여 이러한 방법에 대한 결과 비교는 비교 시점과 관점에 대한 전반적인 동의 결여로 어려운 상태에 있다.

저자들은 1978년 5월부터 1990년 3월 까지 11년 10개월간 경희대학병원 정형외과학교실 교실에서 경골의 가관절증을 주소로 내원한 환자중 생 비골 이식술을 시행하여 치료한, 최소 4년 이상의 추시기간을 가진 13례를 분석하였다. 이들의 남·녀비는 8:5이며 평균 연령은 7.6세였고 평균 추시기간은 8년 6개월이었다. 이식골의 평균 길이는 8cm이었고 골유합에 소요된 기간은 평균 6.5개월, 최종 추시시 골 유합율은 92.3%였다. 형태에 의한 분류로는 Boyd 제 2형이 12례로 대부분을 차지하였고 제 3형이 1례였다. 전방 굴곡 각도는 평균 22.4도였으며 최종 추시시 모든 례에서 이식골의 비대를 관찰할 수 있었다.

합병증으로는 족관절부 내반 및 운동 제한, 긴장성 골절 등이 발생하였으나 대부분에서 보존적인 방법으로 만족스러운 결과를 얻었다.

이상에서 경골의 가관절증 치료에 있어 생 비골 이식술은 특별한 합병증 없이 만족스러운 결과를 얻을 수 있는 효과적인 치료 방법중의 하나로 사료된다.

No. 7.

**Facial Reanimation with Vascularized Cross Facial Nerve Graft
and Neuro-Vascularized Gracilis Muscle Transfer
— A Preliminary Report—**

Kwan Chul Tark, M.D., FACS*, Hoon Bum Lee, M.D., Young Ho Lee, M.D. FACS

Department of Plastic and Reconstructive Surgery Yonsei University College of Medicine, Seoul, Korea

Surgical reconstructions of facial nerve paralysis include static-such as fascial sling-, and dynamic-such as muscle transfer or microsurgical free muscle graft-reconstructions.

The most recent contribution to reanimation of the paralyzed face is the micro-neurovascular muscle transfer, combined with cross face nerve graft, ipsilateral nerve graft, or split hypoglossal anastomoses. The technique provides new, vascularized muscle to the face that can produce pull in various directions and accomplish more normal facial animation.

So far cross facial nerve graft in first stage operation and microsurgical free muscle graft in second stage operation remains one of the most effective and up to dated modalities for facial reanimation.

Meanwhile the degree of myelinated regeneration in the cross face nerve graft mainly determines late functional results of the free muscle graft. In a previous study performed in a rabbit model, we compared the regeneration of non-vascularized free sciatic nerve graft and vascularized sciatic nerve graft. We were able to confirm myelinated regeneration occurs more rapidly and abundantly in the vascularized nerve graft.

We performed non-vascularized cross face sural nerve graft in 1 patient and vascularized cross face sural nerve graft in 8 patients among total 9 patients with chronic facial paralysis. Six to 7 months after the first stage cross face nerve graft we transferred neuro-vascularized gracilis muscle flap in 3 patients- one non-vascularized cross face sural nerve graft and two vascularized cross face sural nerve graft.

In this study we compared the myelinated regeneration of the cross face nerve grafts under the toluidine blue stain. Here we present the results of the cross face nerve graft regeneration, methods of nerve and muscle graft, and early results of the facial reanimation.

No. 8.

**Transmission Electron Microscopy after Use of
Thrombolytic and Antithrombotic agents in Microsurgery
at the Laboratory**

Jun-Mo Lee, M.D. and Chul-Won Chung, M.D.

Department of Orthopedic Surgery, Chonbuk National University Hospital Chonjn, Korea

Microvascular free tissue transplantation has improved along with better instruments, techniques, and

postoperative monitoring systems. The success of microvascular repairs, however, still depend on variable peri-operative factors and prolonged ischemic time is the one which has decisive deleterious influence.

To evaluate the effect of local perfusion of heparin, an antithrombotic agent, and Urokinase, and fibrinolytic agent, on arterial blood flow in a prolonged ischemic tissue, the experiment was conducted with replantation of the rabbit ear with microvascular anastomosis. The results were assessed with laser doppler flowmetry, microangiography, radionuclide-labeled microsphere technique, and transmission electron microscopy.

No. 9.

Free Vascularised Fibular Graft in the Treatment of Congenital Pseudarthrosis of the Tibis.

**Myung Chul Yoo, M.D., Chung Soo Han, M.D., Duke Whan Chung, M.D.
Gi Un Nam, M.D., and Geon Hee Lee, M.D.***

Department of Orthopaedic Surgery, School of Medicine, Kyung Hee University, Seoul, Korea

The great number of different surgical procedures which have been to treat tibial congenital pseudarthrosis attest to refractory nature and that has proved a challenge for many orthopaedic surgeons. The use of multiple treatment techniques over many decades makes comparison of results difficult, especially because there is no universal agreement as to when a result may be considered final. Among these, vascularised fibular graft allows complete excision of all abnormal tissue and should effectively prevent recurrence.

Thirteen among the thirty cases of congenital pseudarthrosis of the tibia seen from May, 1978 to Mar. 1990 were managed by means of vascularised fibular graft at Kyung Hee University Hospital.

Their least follow up period was 4 years. The ratio of male and female was 8:5, and mean age was 7.6 years old at operation. Mean follow up period was 8 years 6 months (range 4 years to 14 years 8 months) and mean graft length was 8.0cm. Duration for union was 6.5 months (range 4 months to 1 year 11 months) and union rate was 92.3%. Boyd type II were 12 cases and type III was 1 case. Mean anterior bowing angle at last follow was 22.4 degrees.

Sufficient hypertrophy of grafted bone was obtained in all cases at time of last follow up as compared to initial size of grafted bone. Several complications were found such as valgus deformity of ankle, limitation of motion of ankle joint and stress fracture.

The authors think of free vascularised fibular graft as being one of successful treatment modalities for congenital pseudarthrosis of the tibia.